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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/673,248	09/30/2003	Masahiko Yamada	243144US-3DIV	2856

22850 7590 11/08/2004

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EXAMINER

BEHREND, HARVEY E

ART UNIT	PAPER NUMBER
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3641

DATE MAILED: 11/08/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/673,248

Applicant(s)

YAMADA ET AL.

Examiner

Harvey E. Behrend

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 6/18/04.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 2-10, 12-22 is/are pending in the application.
- 4a) Of the above claim(s) 3, 5, 8, 10, 12-20, 22 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 2, 4, 6, 7, 9, 26 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
- 2) ☒ Certified copies of the priority documents have been received in Application No. 10/102837.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 9/30/03

- 4) ☒ Interview Summary (PTO-413)  
Paper No(s)/Mail Date Feb 8/19/04
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

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1. Applicant in the 6/18/04 response elected with traverse, the invention of Group I (claims 2-10, 21). Applicants arguments have been considered, however, they are unpersuasive as the search areas for Groups I and II are not coextensive and, the search and examination of both inventions would place an undue burden on the examiner.

The 6/18/04 response did not provide an election of one of the species set forth in section 2 of the 5/19/04 Office action.

Applicants attorney, Mr. Philip Hoffman, in a telephone interview on 8/19/04, elected specie G (the embodiment of Fig. 11 with the rotation prevention pin of Fig. 9B).

Mr. Hoffmann indicated claims 2, 4, 6, 7, 9, 21 as readable on the elected specie.

As discussed with Mr. Hoffmann, while the drawings show a thimble screw having a hole therethrough from a spot facing hole of a seat to a distal end, the specification does not refer to any specific figure as showing a "first drain hole" and a "second drain hole" as recited in claim 6.

It appears that the only reference to first and second drain holes is on page 10 of the specification in regard to a "third aspect of the present invention", however, such is not referred to in the portion of the specification which refers to the "Detailed Description of the Invention" on pages 14+.

While all of said claims 2, 4, 6, 7, 9, 21 will be treated in this Office action as readable on the elected specie, the issue of whether or not claims 6, 7 and 9 are properly readable on the elected specie will be reviewed upon applicants response to this Office action.

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2. Applicant is required under 37 CFR 1.105 to show how all of the limitations of claim 6 (in particular, the first and second drain holes and their relationships to the "spot facing hole" and to the hole at the "distal end") read on the elected species and as to which elements they are in the drawings, to facilitate examination.

3. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the features of claim 6 (in particular the first and second drain holes and their relationships to the spot facing hole and the hole at the distal end), and the feature of more than one drain hole as recited in claim 21, must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will

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be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

4. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claims 2, 4, 6, 7, 9, 21 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The claims are vague, indefinite and incomplete and poorly phrased.

Since the only component of the fuel assembly that is positively recited is the thimble screw, there is no proper antecedent basis for terms such as "bottom nozzle", "bottom surface side", "spot facing hole", "spot facing hole of a seat", "distal end", "drain hole side", etc.

Claim 6 is vague, indefinite and incomplete as to what all is meant by and is encompassed by the reference to a "first drain hole" and to a "second drain hole" (such has not been defined in the specification.

The claims are incomplete in omitting essential elements, such omission amounting to a gap between the elements. See MPEP 2172.01. The invention could not possibly function in the manner set forth in the claims without a recitation of the

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other components of the fuel assembly including the upper and lower nozzles, the guide thimbles, etc.

6. Claim 21 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

There is no proper support in the specification for the thimble screw having more than one drain hole.

7. Claims 6, 7, 9 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

There is no adequate description nor enabling disclosure of what all is meant by and is encompassed by, the "first drain hole" and the "second drain hole" as described in claim 6 and referred to in the specification on page 10.

8. Claims 2, 4, 6, 7, 9, 21 are rejected under 35 U.S.C. 112, first paragraph, as based on a disclosure which is not enabling. Applicants claimed invention could not possibly function in the manner recited in the claims if the only component present of the fuel assembly, is the thimble screw. Clearly, the other (non-recited) components of the fuel assembly including the bottom nozzle, the guide thimbles, etc., which are critical

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or essential to the practice of the invention, but not included in the claim(s) is not enabled by the disclosure. See *In re Mayhew*, 527 F.2d 1229, 188 USPQ 356 (CCPA 1976). Even applicants specification and drawings show these "non-recited" components as being necessary and hence critical.

9. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

10. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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11. Claims 2, 6, 7, 21 are rejected under 35 U.S.C. 102(a) as being clearly anticipated by Japan 2002-40182 (cited by applicant).

It is noted that applicants priority dates are prior to the reference. However, it is still proper to rely on the reference in an art rejection.

Applicant cannot rely upon the foreign priority papers to overcome this rejection because a translation of said papers has not been made of record in accordance with 37 CFR 1.55. See MPEP § 201.15.

12. Claims 2, 6, 7, 21 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by Verdier (I) (5232655).

13. Claims 2, 6, 7, 21 are rejected under 35 U.S.C. 102(a) as being clearly anticipated by Frederickson et al.

Note retaining pin 506 (col. 3 lines 8-14).

14. Claims 2, 4, 6, 7, 9, 21 are rejected under 35 U.S.C. 102(b) as being anticipated by Widener or Verdier (II) (5606583).

The references each show a thimble screw disposed in a bottom nozzle.

Applicants claims do not recite any particular structure distinguishing the "pin" from the thimble screw nor define them as being separate, individual components.

Thus, one can take element 64 of Widener and the screw means in Fig. 1 of Verdier (II) and arbitrarily in an imaginary horizontal plane, divide each of them into an upper and lower portion with one portion being the thimble screw and the other portion being the rotation prevention pin. Note that the drawings of each reference show the upper end of the screw means as being flat.



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15. Claims 2, 6, 7, 21 are rejected under 35 U.S.C. 102(a) as being clearly anticipated by applicants own admission of prior art in the specification under "Background of the Invention" (particularly pages 2+ and Figs. 2A and 2B).

16. The specification appears to indicate that the use of a rotation prevention pin was prior art to applicants, that this prior art was used in drafting the present application and that applicant has presumably an improvement thereon.

Accordingly, under 37 CFR 1.105 applicant is required to submit such information as may be reasonably necessary to properly examine or treat the above matters (note in this respect examples (iii), (iv), (v), (vi) of part (a)(1) of 37 CFR 1.105).

17. The other references cited further illustrate pertinent art.

18. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Harvey Behrend whose telephone number is (703) 305-1831. The examiner can normally be reached on Tuesday to Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Carone, can be reached on (703) 306-4198. The fax phone number for the organization where this application or proceeding is assigned is (703) 306-4195.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 306-1113.



HARVEY E. BEHREND  
PRIMARY EXAMINER